

REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the following remarks.

The Applicants acknowledge with appreciation the indication in the Final Rejection that claim 33 is allowed.

Claims 23-32 and 34-42 stand rejected, under 35 USC §103(a), as being unpatentable over Murakami et al. (US 2004/01211827) in view of Tirkkonen et al. (US 2004/0131041).

Claims 43-46 stand rejected, under 35 USC §103(a), as being unpatentable over Kim et al. (US 2004/0132496) in view of Tirkkonen et al. (US 2004/0131041). The Applicants respectfully traverse these rejections as follows.

The present application claims priority based on Japanese patent application number JP2003-188898, having a filing date of June 30, 2003, and Japanese patent application number JP2004-190418, having a filing date of June 28, 2004. It is noted that claims 23-27, 34-37, and 43-46 find support, for example, in Figs. 1, 3, 4, 7, 8, and 14 and paragraphs [0032], [0033], [0043]-[0047], [0057], [0059], [0060], [0067], [0068], [0074]-[0082], [0089], [0092], and [0113] of Japanese patent application number JP2003-188898. The Applicants provide herewith a verified English translation of priority document JP2003-188898 so as to perfect their claim for priority based thereon.

The submission of such verified English translation of priority document JP2003-188898 establishes the date of invention as June 30, 2003 for the above-noted noted claims 23-27, 34-37, and 43-46.

Accordingly, as to claims 23-27, 34-37, and 43-46, this submission removes Murakami as a reference under both 35 USC 102(a) and 35 USC 102(e) given that the present date of invention of June 30, 2003 is earlier than Murakami's U.S. filing date (November 12, 2003) and publication date (June 24, 2004) and removes Kim as a reference under 35 USC 102(e) given that this date of invention of June 30, 2003 is earlier than Kim's U.S. filing date (November 25, 2003). Moreover, as to claims 23-27, 34-37, and 43-46, by application of 35 USC 103(c), Murakami could not be an effective reference under 35 USC 102(e) for the further reason that Murakami and the present invention, at the time the present invention was made, shared the same assignee. Kim is not available as a reference under 35 USC 102(a) against of the pending claims because Kim's publication date of July 8, 2004 is later than the instant PCT International Application filing date of June 30, 2004.

In sum, because Applicants' priority date of June 30, 2003, for priority document JP2003-188898, precedes the U.S. filing dates of Murakami and Kim, Murakami and Kim are disqualified, under any provisions of 35 USC 102, as prior art references against the above-identified claims 23-27, 34-37, and 43-46 which are supported by priority document JP2003-188898.

Moreover, with regard to base claims 23 and 34, it is noted that Murakami discloses a transmitting apparatus adopting OFDM communication and also discloses that a frame configuration signal indicates a frame configuration, specifically, the transmission timing of an estimation symbol (see Murakami Figs. 3 and 11).

Tirkkonen discloses that mutual interference between sequences to be added together may be affected by adding a phase shift to the addition, so as to achieve a transmit diversity MIMO transmission, yielding a code matrix:  $c(s_1, s_2, s_3, s_4)$  (see, Tirkkonen paragraph [0044]).

However, the frame configuration signal of the Applicants' claimed invention includes a symbol to report a transmission method and, therefore, the Applicants' claimed invention patentably differs from Murakami's disclosure in this point. That is, Murakami cannot decide whether to use a first data sequence or a second data sequence.

Similarly, Tirkkonen fails to disclose a frame configuration signal including a symbol to report a transmission method and, therefore, the Applicants' claimed invention patentably differs from Tirkkonen in this point.

In view of the above, the Applicants submit that the combined teachings of Murakami and Tirkkonen do not suggest the invention defined by claims 23 and 34. Therefore, allowance of claims 23 and 34 and all claims dependent therefrom is warranted for this independent reason.

Therefore, allowance of claims 23-27, 34-37, and 43-46 is considered to be warranted for at least the above reasons.

The sole remaining rejections are of Claims 28-32, and 38-42 under 35 USC §103(a) as unpatentable over Murakami et al. (US 2004/01211827) in view of Tirkkonen et al. (US 2004/0131041).

Claims 28 and 38 recite cyclically shifting a data sequence by a predetermined period of time. The Final Rejection proposes that Tirkkonen discloses delay diversity in paragraph [0046] (see Final Rejection sections 11 and 21). Although Tirkkonen may disclose delay diversity, as

proposed in the Final Rejection, Tirkkonen does not disclose the Applicants' claimed subject matter of cyclically shifting a data sequence.

Claims 29-31 and 39-41 recite using an eigenmode as a method for transmitting a data sequence. By contrast to the Applicants' claimed subject matter, Murakami discloses determining the transmission power of a signal based on a reception power and an eigenvalue (see Murakami paragraph [0081], lines 6-8). And Tirkkonen is not cited in the Final Rejection for supplementing the teachings of Murakami in this regard.

Claims 32 and 42 recite switching, in accordance with the number of communication parties, between the generation of a first sequence of signals representing the same data and a second sequence signals representing varying data. The Final Rejection proposes that Murakami discloses the Applicants' claimed first sequence of signals and that Tirkkonen discloses the Applicants' claimed second sequence (see Final Rejection, sections 15 and 21). However, the Final Rejection identifies no findings of fact to support an inference that either one of the applied references suggests: (1) both of the Applicants' claimed first and second sequences or (2) switching between the generation of two different signal sequences.

Accordingly, the Applicants submit that the teachings of Murakami and Tirkkonen, even if combined as proposed in the Final Rejection, still would lack the above-noted features of claims 28-32 and 38-42 and thus these references, considered individually or in combination, do not render obvious the subject matter defined by claims 28-32 and 38-42. Therefore, allowance of claims 28-32 and 38-42 is warranted.

In view of the above, it is submitted that this application is in condition for allowance, and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

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